

IN THE CLAIMS:

Following entry of the Amendment under 37 C.F.R. § 1.116 filed March 24, 2005, please amend claim 23 as follows:

Claim 1 (Previously Presented): An optical recording medium having a plurality of recording layers of a double-spiral structure in which information is recorded on both of land tracks and groove tracks, wherein

a spiral of a first recording layer of said recording layers is in a forward direction,

a spiral of a second recording layer of said recording layers is in a backward direction,

and

first information is recorded on one of a land track and a groove track of said first recording layer in the direction from an inner periphery toward an outer periphery of said optical recording medium, and second information subsequent to said first information is recorded on one of a land track and a groove track of said second recording layer in the direction from the outer periphery toward the inner periphery of said optical recording medium,

wherein third information subsequent to said second information is recorded on one of the land track and the groove track of said first recording layer on which said first information is not recorded, and fourth information subsequent to said third information is recorded on one of the land track and the groove track of said second recording layer on which said second information is not recorded.

Claim 2 (Previously Presented): An optical recording medium having a plurality of recording layers of a double-spiral structure in which information is recorded on both of land tracks and groove tracks, wherein

a spiral of a first recording layer of said recording layers is in a forward direction,

a spiral of a second recording layer of said recording layers is in a backward direction,

and

first information is recorded on one of a land track and a groove track of said first recording layer in the direction from an outer periphery toward an inner periphery of said optical recording medium, and second information subsequent to said first information is recorded on one of a land track and a groove track of said second recording layer in the direction from the inner periphery toward the outer periphery of said optical recording medium,

wherein third information subsequent to said second information is recorded on one of the land track and the groove track of said first recording layer on which said first information is not recorded, and fourth information subsequent to said third information is recorded on one of the land track and the groove track of said second recording layer on which said second information is not recorded.

Claims 3-4 (Canceled).

Claim 5 (Previously Presented): The optical recording medium according to claim 1, wherein said first information is recorded on the land track of said first recording layer, and said second information is recorded on the land track of said second recording layer.

Claim 6 (Previously Presented): The optical recording medium according to claim 2, wherein said first information is recorded on the land track of said first recording layer, and said second information is recorded on the land track of said second recording layer.

Claim 7 (Previously Presented): The optical recording medium according to claim 1, wherein said first information is recorded on the groove track of said first recording layer, and said second information is recorded on the groove track of said second recording layer.

Claim 8 (Previously Presented): The optical recording medium according to claim 2, wherein said first information is recorded on the groove track of said first recording layer, and said second information is recorded on the groove track of said second recording layer.

Claim 9 (Previously Presented): The optical recording medium according to claim 1, wherein
either of said first recording layer and said second recording layer has been divided into N zones (zone 1 to zone N) from the inner periphery toward the outer periphery of said optical recording medium, and

first information is recorded on one of the land track and the groove track in zone n (n : a natural number not less than one and not more than N) of said first recording layer in the direction from the inner periphery toward the outer periphery of said optical recording medium, and second information subsequent to said first information is recorded on one of the land track and the groove track in zone n of said second recording layer in the direction from the outer periphery toward the inner periphery of said optical recording medium.

Claim 10 (Original): The optical recording medium according to claim 9, wherein an outer periphery end of zone n of said second recording layer is located nearer to the outer periphery of said optical recording medium than an outer periphery end of zone n of said first recording layer.

Claim 11 (Previously Presented): The optical recording medium according to claim 2, wherein

either of said first recording layer and said second recording layer has been divided into N zones (zone 1, zone 2, ..., zone N) from the inner periphery toward the outer periphery of said optical recording medium, and

first information is recorded on one of the land track and the groove track in zone n (n : a natural number not less than one and not more than N) of said first recording layer in the direction from the outer periphery toward the inner periphery of said optical recording medium, and second information subsequent to said first information is recorded on one of the land track

and the groove track in zone n of said second recording layer in the direction from the inner periphery toward the outer periphery of said optical recording medium.

Claim 12 (Original): The optical recording medium according to claim 11, wherein an inner periphery end of zone n of said second recording layer is located nearer to the inner periphery of said optical recording medium than an inner periphery end of zone n of said first recording layer.

Claim 13 (Previously Presented): The optical recording medium according to claim 9, wherein said first information is recorded on the land track in zone n of said first recording layer, and said second information is recorded on the land track in zone n of said second recording layer.

Claim 14 (Previously Presented): The optical recording medium according to claim 11, wherein said first information is recorded on the land track in zone n of said first recording layer, and said second information is recorded on the land track in zone n of said second recording layer.

Claim 15 (Previously Presented): The optical recording medium according to claim 9, wherein said first information is recorded on the groove track in zone n of said first recording layer, and said second information is recorded on the groove track in zone n of said second recording layer.

Claim 16 (Previously Presented): The optical recording medium according to claim 11, wherein said first information is recorded on the groove track in zone n of said first recording layer, and said second information is recorded on the groove track in zone n of said second recording layer.

Claim 17 (Previously Presented): An optical recording medium having a plurality of recording layers of a double-spiral structure in which information is recorded on both of land tracks and groove tracks, wherein

at least a first recording layer, a second recording layer, a third recording layer, and a fourth recording layer are provided as said recording layers,

spirals of said first recording layer and said third recording layer are in a forward direction,

spirals of said second recording layer and said fourth recording layer are in a backward direction,

a first recording direction from an inner periphery toward an outer periphery of the optical recording medium and a second recording direction from the outer periphery toward the inner periphery of the optical recording medium are defined as the order of recording information,

the recording direction of said first recording layer and said third recording layer is one of said first recording direction and said second recording direction,

the recording direction of said second recording layer and said fourth recording layer is the other of said first recording direction and said second recording direction, and

physical addresses are allocated in the order of one of a land track and a groove track of said first recording layer, one of a land track and a groove track of said second recording layer, the other of the land track and the groove track of said first recording layer, the other of the land track and the groove track of said second recording layer, one of a land track and a groove track of said third recording layer, one of a land track and a groove track of said fourth recording layer, the other of the land track and the groove track of said third recording layer, and the other of the land track and the groove track of said fourth recording layer.

Claim 18 (Previously Presented): An information recording apparatus for recording information onto an optical recording medium having at least a first recording layer and a second recording layer of a double-spiral structure in which information is to be recorded on both of land tracks and groove tracks, wherein

a spiral of said first recording layer is in a forward direction,

a spiral of said second recording layer is in a backward direction,

a first recording direction from an inner periphery toward an outer periphery of the optical recording medium and a second recording direction from the outer periphery toward the inner periphery of the optical recording medium are defined as the order of recording information,

information is to be recorded in said first recording layer in one of said first recording direction and said second recording direction,

information is to be recorded in said second recording layer in the other of said first recording direction and said second recording direction, and

physical addresses for recording are allocated in the order of one of a land track and a groove track of said first recording layer, one of a land track and a groove track of said second recording layer, the other of the land track and the groove track of said first recording layer, and the other of the land track and the groove track of said second recording layer.

Claim 19 (Original): An information reproducing apparatus for reproducing information from an optical recording medium having at least a first recording layer and a second recording layer of a double-spiral structure in which information is recorded on both of land tracks and groove tracks, wherein

a spiral of said first recording layer is in a forward direction,

a spiral of said second recording layer is in a backward direction,

a first reproducing direction from an inner periphery toward an outer periphery of the optical recording medium and a second reproducing direction from the outer periphery toward the inner periphery of the optical recording medium are defined as the order of reproducing information,

information is reproduced from said first recording layer in one of said first reproducing direction and said second reproducing direction,

information is reproduced from said second recording layer in the other of said first reproducing direction and said second reproducing direction, and

information is reproduced following physical addresses allocated in the order of one of a land track and a groove track of said first recording layer, one of a land track and a groove track of said second recording layer, the other of the land track and the groove track of said first recording layer, and the other of the land track and the groove track of said second recording layer.

Claim 20 (Original): An information reproducing apparatus for reproducing information from an optical recording medium having at least a first recording layer and a second recording layer of a double-spiral structure in which information is recorded on both of land tracks and groove tracks, wherein

a spiral of said first recording layer is in a forward direction,

a spiral of said second recording layer is in a backward direction,

information has been recorded in said first recording layer in the direction from an inner periphery toward an outer periphery of said optical recording medium,

information has been recorded in said second recording layer in the direction from the outer periphery toward the inner periphery of said optical recording medium,

either of said first recording layer and said second recording layer has been divided into N zones (zone 1 to zone N) from the inner periphery toward the outer periphery of said optical recording medium,

first information has been recorded on one of a land track and a groove track in zone n (n: a natural number not less than one and not more than N) of said first recording layer, and second

information subsequent to said first information has been recorded on one of a land track and a groove track in zone n of said second recording layer, and

a driving device is provided for driving a pickup so that said first information is reproduced following physical addresses, the focus of said pickup is slid by a predetermined amount in the direction toward the inner periphery of said optical recording medium with a focus jump from said first recording layer to said second recording layer, and then said second information is reproduced following physical addresses.

Claim 21 (Original): An information reproducing apparatus for reproducing information from an optical recording medium having at least a first recording layer and a second recording layer of a double-spiral structure in which information is recorded on both of land tracks and groove tracks, wherein

a spiral of said first recording layer is in a forward direction,
a spiral of said second recording layer is in a backward direction,
information has been recorded in said first recording layer in the direction from an outer periphery toward an inner periphery of said optical recording medium,

information has been recorded in said second recording layer in the direction from the inner periphery toward the outer periphery of said optical recording medium,

either of said first recording layer and said second recording layer has been divided into N zones (zone 1 to zone N) from the inner periphery toward the outer periphery of said optical recording medium,

first information has been recorded on one of a land track and a groove track in zone n (n : a natural number not less than one and not more than N) of said first recording layer, and second information subsequent to said first information has been recorded on one of a land track and a groove track in zone n of said second recording layer, and

a driving device is provided for driving a pickup so that said first information is reproduced following physical addresses, the focus of said pickup is slid by a predetermined amount in the direction toward the outer periphery of said optical recording medium with a focus jump from said first recording layer to said second recording layer, and then said second information is reproduced following physical addresses.

Claim 22 (Previously Presented): An optical recording medium having a plurality of recording layers in which information is to be recorded on both of land tracks and groove tracks, wherein

physical addresses in a land track are allocated discontinuously from physical addresses in a groove track in each of the recording layers.

Claim 23 (Currently Amended): ~~The~~ An optical recording medium ~~according to claim 22~~ having a plurality of recording layers in which information is to be recorded on both of land tracks and groove tracks, wherein

at least a first recording layer and a second recording layer are provided as in the plurality of recording layer layers,

physical addresses are allocated in the order of one of a land track and a groove track of the first recording layer, one of a land track and a groove track of the second recording layer, the other of the land track and the groove track of the first recording layer, and the other of the land track and the groove track of the second recording layer.

Claim 24 (Previously Presented): An information recording apparatus for recording information onto an optical recording medium having a plurality of recording layers in which information is to be recorded on both of land tracks and groove tracks, wherein at least a first recording layer and a second recording layer are provided as the recording layer,

wherein physical addresses are allocated in the order of one of a land track and a groove track of the first recording layer, one of a land track and a groove track of the second recording layer, the other of the land track and the groove track of the first recording layer, and the other of the land track and the groove track of the second recording layer.

Claim 25 (Previously Presented): An information reproducing apparatus for reproducing information from an optical recording medium having a plurality of recording layers in which information is recorded on both of land tracks and groove tracks, wherein physical addresses in a land track are allocated discontinuously from physical addresses in a groove track in each of the recording layers,

wherein the apparatus reproduces information in accordance with the physical addresses of the optical recording medium.

Claim 26 (Previously Presented): An information reproducing apparatus for reproducing information from an optical recording medium having a plurality of recording layers in which information is recorded on both of land tracks and groove tracks, wherein at least a first recording layer and a second recording layer are provided as the recording layer,

wherein the apparatus reproduces information in accordance with the physical addresses which are allocated in the order of one of a land track and a groove track of the first recording layer, one of a land track and a groove track of the second recording layer, the other of the land track and the groove track of the first recording layer, and the other of the land track and the groove track of the second recording layer.